<u>REMARKS/ARGUMENTS</u>

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-23 and 27-30 are presently pending in this case. Claims 24-26 are canceled without prejudice or disclaimer, Claims 1-23 are amended, and new Claims 27-30 are added by the present amendment. As amended Claims 1-23 and new Claims 27-30 are supported by the original disclosure,[1] no new matter is added.

In the outstanding Official Action, Claims 1-19 and 21-26 were rejected under 35 U.S.C. §101; Claims 1-4, 6, 8-17, and 20-26 were rejected under 35 U.S.C. §102(b) as anticipated by <u>Kohonen et al.</u> ("Self Organization of a Massive Document Collection," hereinafter "<u>Kohonen</u>"); Claims 5 and 7 were rejected under 35 U.S.C. §103(a) as unpatentable over <u>Kohonen</u> in view of <u>Hamilton et al.</u> (U.S. Patent No. 6,874,109, hereinafter "<u>Hamilton</u>"); and Claims 18 and 19[2] were rejected under 35 U.S.C. §103(a) as unpatentable over <u>Kohonen</u> in view of <u>Derthick</u> ("Interface for Palmtop Image Search").

Initially, it is respectfully noted that references AL to AN listed on the Information Disclosure Statement filed September 17, 2003 were not initialed as considered. It is respectfully requested that a PTO form 1449 with these references initialed be provided with the next Office Communication.

With regard to the rejection of Claims 1-15 under 35 U.S.C. §101, it is respectfully noted that Claim 1 recites a "system," which is respectfully submitted to be a "machine," not functional descriptive material or a recording medium including functional descriptive material. Thus, the requirements related to functional descriptive material in MPEP §2106.01 are not believed to be relevant to these claims.

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[1] See, e.g., the specification at page 6, line 24 to page 7, line 26 and page 14, lines 27-31.
[2] The outstanding Office Action listed Claims 19 and 20, but based on the description it is clear that Claims 18 and 19 were intended to be rejected on this basis.

Further, amended Claim 1 recites "a data network" and "an information retrieval client system" wherein "said client system includes a node position generating unit." As all of these elements are physical objects, it is respectfully submitted that Claim 1 (and Claims 2-15 dependent therefrom) is in compliance with all requirements under 35 U.S.C. §101.

With regard to the rejection of Claim 16 under 35 U.S.C. §101, it is respectfully noted that Claim 16 recites "a store" which is also a physical object. Thus, it is respectfully submitted that Claim 16 is in compliance with all requirements under 35 U.S.C. §101.

With regard to the rejection of Claims 17-19 under 35 U.S.C. §101, it is respectfully noted that Claim 17 recites "a node position generating unit" which is a physical object. Thus, it is respectfully submitted that Claim 17, and Claims 18 and 19 dependent therefrom, is in compliance with all requirements under 35 U.S.C. §101.

With regard to the rejection of Claims 20-22 under 35 U.S.C. §101, it is respectfully noted that Claims 20-22 are method claims, contrary to the assertion in the outstanding Office Action that "They are clearly not a series of steps."[3] As a process or method is a statutory class of subject matter, it is respectfully submitted that Claims 20-22, and Claim 23 (an article of manufacture) dependent therefrom, are also in compliance with all requirements under 35 U.S.C. §101.

With regard to the rejection of Claims 1-4, 6, 8-17, and 20-26 as anticipated by Kohonen, that rejection is respectfully traversed.

In the invention recited in Claim 1, information items are stored at storage nodes which transmit index data to client nodes via a data network. The client nodes take care of generating the node positions from the index data provided by the storage nodes. Thus, part of the task of generating node positions is carried out by a storage node, and part by a client node. That is to say that a part of the node generation process is carried out at the machine

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[3]See the outstanding Office action at page 2, line 21.

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where the information items are stored. A technical advantage of this is to reduce the network traffic needed between the storage node and the client system, and to reduce the processing overhead at the client system. Note that neither of these advantages is even relevant in a single-system arrangement. It is respectfully submitted that Kohonen simply does not describe this *split* arrangement.

In this regard, amended Claim 1 recites in part:

> a data network; and
> an information retrieval client system connected to said
> data network; and
> one or more information item storage nodes connected
> to the data network,
> wherein each storage node comprises a store configured
> to store a plurality of information items and an indexer for
> transmitting data derived from information items stored at that
> storage node to said client system via said data network, and
> said client system includes a node position generating
> unit configured to generate a node position in respect of each
> information item represented by said received data responsive
> to data received from said indexer of a storage node.

Kohonen describes a system where information items are stored on a database.[4] A computer (the six processor SGI machine of page 582, column 2 of Kohonen) generates a map including node positions from the raw stored data. It also generates a final user interface (the WWW pages mentioned on page 583 of Kohonen) to the map and node positions.

This computer was apparently cited as "one or more information storage nodes" by the outstanding Office Action.[5] However, it is not clear what is being cited as "a data network" or "an information retrieval client system connected to said data network." In fact, it is respectfully submitted that Kohonen describes a single system (the six processor SGI machine) for carrying out the whole process to generate node positions, and thus does not teach "a data network" or "an information retrieval client system connected to said data network."

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[4]See Kohonen, page 582, column 2.
[5]See the outstanding Office Action at page 10, lines 5-22.

As regards the reference to the WWW/HTML pages, these represent the final user view of the data. The fact that the user may look at the HTML pages via a networked browser does not mean that the user's browser is acting as a client system as recited in Claim 1, because a client system as defined in Claim 1 includes a node generator. The user's browser of Kohonen does not. In fact, the reference to page 584 of Kohonen regarding the display of matches as circles does not teach "said client system includes a node position generating unit configured to generate a node position in respect of each information item represented by said received data responsive to data received from said indexer of a storage node."

As well settled case law holds that a claim is anticipated only if each and every element *as set forth in the claim* is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). (Emphasis added.) Further, the identical invention must be shown *in as complete detail as is contained in the ... claim*. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). (Emphasis added.) See also MPEP §2131. As the cited portion of Kohonen does not describe "a client system" in as complete a detail as recited in Claim 1, Kohonen does not teach "a client system" as defined in Claim 1.

Moreover, the reference to 800 MB of memory in the six processor machine of Kohonen is part of a discussion of the large computational requirements for generating the map. In 2000, when Kohonen was published, a computer having six processors and a massive (for then) 800 MB of main memory was a very powerful computer. However, this does not describe that the database is stored by the SGI machine. Rather, it is just working memory for the map generation process. Even assuming *arguendo* that the database had been

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stored by the SGI machine in its main memory, that still does not teach the split of tasks between a networked storage node and client systems as defined in Claim 1.

Consequently, as Kohonen at least does not teach "a client system" as defined in Claim 1, Claim 1 (and Claims 2-15 dependent therefrom) is not anticipated by Kohonen and is patentable thereover.

In addition, it is respectfully submitted that Claims 2 and 3 recite subject matter that further defines over Kohonen. Claims 2 and 3 both recite subject matter that is not described by Kohonen *in as complete detail* as recited in each respective claim. Thus, Claims 2 and 3 further define over Kohonen.

Amended Claim 16 recites in part, "a store configured to store a plurality of information items and an indexer for transmitting data derived from information items stored at that storage node to said client system via said data network." As noted above, the outstanding Office Action apparently cited the six processor SGI machine of Kohonen as "an information storage node" as recited in Claim 16. However, it is not clear what is being cited as "a data network" or "an information retrieval client system connected to said data network." Further, it is not clear what is being cited as "an indexer for transmitting data derived from information items stored at that storage node to said client system via said data network." As it is respectfully submitted that Kohonen does not teach "a store" *in as complete a detail* as defined in Claim 16, it is respectfully submitted that Claim 16 is not anticipated by Kohonen and is patentable thereover.

Amended Claim 17 recites in part, "a node position generating unit configured to generate a node position in respect of each information item represented by said received data responsive to data received from said indexer of a storage node." As noted above, the reference to page 584 of Kohonen regarding the display of matches as circles does not teach "a node position generating unit" *in as complete a detail* as recited in Claim 17.

Consequently, it is respectfully submitted that Claim 17 (and Claims 18 and 19 dependent

therefrom) is not anticipated by <u>Kohonen</u> and is patentable thereover.

Amended Claim 20 recites in part:

> storing a plurality of information items at each storage
> node;
> transmitting data by each storage node derived from
> information items stored at that storage node to said client
> system via said data network; and
> generating a node position in respect of each
> information item represented by said received data by said
> client system responsive to data received from an indexer of a
> storage node.

It is respectfully submitted that the reference to page 584 of <u>Kohonen</u> regarding the

display of matches as circles does not teach "generating a node position in respect of each

information item represented by said received data by said client system responsive to data

received from an indexer of a storage node" *in as complete a detail* as recited in Claim 20.

Consequently, it is respectfully submitted that Claim 20 (and Claim 23 dependent therefrom)

is not anticipated by <u>Kohonen</u> and is patentable thereover.

Amended Claim 21 recites in part "transmitting data derived from information items

stored at that storage node to the client system via the data network." As noted above with

respect to Claim 16, it is not clear what is being cited as "transmitting data derived from

information items stored at that storage node to said client system via said data network." As

it is respectfully submitted that <u>Kohonen</u> does not teach this feature *in as complete a detail* as

defined in Claim 21, it is respectfully submitted that Claim 21 (and Claim 23 dependent

therefrom) is not anticipated by <u>Kohonen</u> and is patentable thereover.

Amended Claim 22 recites in part "generating a node position in respect of each

information item represented by said received data responsive to data received from said

indexer of a storage node." As noted above with respect to Claim 17, the reference to page

584 of <u>Kohonen</u> regarding the display of matches as circles does not teach "generating a node

position in respect of each information item represented by said received data responsive to data received from said indexer of a storage node." As it is respectfully submitted that Kohonen does not teach this feature *in as complete a detail* as defined in Claim 22, it is respectfully submitted that Claim 22 (and Claim 23 dependent therefrom) is not anticipated by Kohonen and is patentable thereover.

With regard to the rejection of Claims 5 and 7 as unpatentable over Kohonen in view of Hamilton, it is noted that Claims 5 and 7 are dependent from Claim 1, and thus are believed to be patentable for at least the reasons discussed above. Further, it is respectfully submitted that Hamilton does not cure any of the above-noted deficiencies of Kohonen. Accordingly, it is respectfully submitted that Claims 5 and 7 are patentable over Kohonen in view of Hamilton.

With regard to the rejection of Claims 18 and 19 as unpatentable over Kohonen in view of Derthick, it is noted that Claims 18 and 19 are dependent from Claim 17, and thus are believed to be patentable for at least the reasons discussed above. Further, it is respectfully submitted that Derthick does not cure any of the above-noted deficiencies of Kohonen. Accordingly, it is respectfully submitted that Claims 18 and 19 are patentable over Kohonen in view of Derthick.

New Claims 27-30 are supported at least by the specification at page 6, line 24 to page 7, line 26 and page 14, lines 27-31. New Claims 27-30 are dependent from Claim 1, and thus are believed to be patentable for at least the reasons described above with respect to Claim 1. Further, each of Claims 27-30 recites subject matter that further defined over the cited references.

In this regard, it is respectfully submitted that none of the cited references teaches or suggests that "data is metadata derived from the information item" as recited in new Claim 27, "the data is the information item with all stop words removed" as recited in new Claim

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28, "the data is a list of all stem words included in the information item" as recited in Claim

29, or "the data is a feature vector derived from the metadata" as recited in new Claim 30.

Consequently, new Claims 27-30 are further patentable over the cited references

Accordingly, the pending claims are believed to be in condition for formal allowance.

An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Edward Tracy

Bradley D. Lytle
Attorney of Record
Registration No. 40,073

Edward W. Tracy, Jr.
Registration No. 47,998

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413-2220
(OSMMN 06/04)

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